

APPENDIX: D

REAL ESTATE PLAN

AMERICAN RIVER WATERSHED CALIFORNIA

LONG-TERM STUDY

(1) INTRODUCTION

This report, prepared in accordance with ER 405-1-12, 12-16, Real Estate Plan, presents the Real Estate requirements at the same level of detail (F-5) as the alternative plans under consideration are detailed. This report is prepared to support the additional flood control study (Long-Term Study) undertaken in accordance with the provisions of Section 566 Folsom Dam and Reservoir Additional Storage and Additional Flood Control Studies (a) and (b) of WRDA 1999 (PL 106-53). The purpose of this study is to assess opportunities to (1) increase surcharge flood control storage at the Folsom Dam and Reservoir and (2) to study all levees on the American River and on the Sacramento River downstream and immediately upstream of the confluence of such Rivers to assess opportunities to increase potential flood protection through levee modifications. Subsequent to the identification of the Federally supported alternatives material, information, and references relating to the unsupported alternatives will be stricken from the plan. At the direction of Congress, this report is narrow in focus and does not address or update the National Economic Development (NED) Plan for the Auburn Dam as identified in the American River Watershed Investigation of 1991. The NED plan is identified as such in the basic report and the costs associated with that plan have been updated on a price level basis for informational purposes.

Previous studies include the Supplemental Information Report (SIR) for the American River Project, completed in March of 1996, which supplemented the American River Watershed Investigation of April 1991; The Second Addendum to the Supplemental Information Report, Lower American River WRDA 1999 Common Features; the Information Paper, American River Watershed, California, August 1999; and the Additional Information – Folsom Dam Flood Control Storage & Downstream Levees, January 2000 Report.

The cost share sponsor of this study is the State of California, Department of Water Resources (DWR), and the Sacramento Area Flood Control Agency (SAFCA).

This Real Estate Plan provides information about the real estate requirements needed for each alternative under consideration. The information is to be used in the agency and public review process in identifying the Locally Preferred Plan or plans. Subsequent to the final public meeting regarding feasibility alternatives a locally preferred plan will be selected and this plan will be modified accordingly. This Real Estate Plan will be modified to focus upon that Federally supported alternative that is congruent with the locally preferred plan. More detailed cost data supported by a specific gross appraisal,

base level cost estimate and MCACE's will be prepared and presented to support a cost shared project authorization.

Alternatives Under Consideration:

Alternative 1: No Action

There are no real estate requirements associated with this alternative.

Folsom Dam Raise: Alternatives 2, 3 and 4

Existing Federal Project

The proposal to raise Folsom Dam at all three levels under consideration would effect an existing Federal Project (Folsom Dam and Lake), consisting of 15,717.47 acres fee and 270.63 acres of easement area. This project was constructed as a component of the Central Valley Project, California. The dam and reservoir is a multi-purpose flood control project with flood control, water supply, and recreation components. As a multipurpose facility, subsequent to construction of the dam by the Corps of Engineers, the facility was turned over to the Bureau of Reclamation for control, custody and operation. With the exception of the area known as the Reclamation Zone, the project lands have been leased to the California, Department of Parks and Recreation (DPR), subject to their use for reclamation and other Central Valley Project purposes pursuant to the Federal Reclamation laws, Acts of June 17, 1902 (32 Stat. 388), and acts supplementary thereto and amendatory thereof. The consideration for the lease is the erection of a plaque on subject property bearing an inscription designating the property as a park and the administration of the demised premises.

For Alternatives 2, 3, and 4, the proposal is the modification of the dam and dike height of the existing flood control structures 3.5, 7, and 12 ft. respectively. Dam modification of this magnitude is considered a new project start. The proposed dam raises and subsequent project operations would result in a new full pool elevation and cause lands to be inundated where they were not previously inundated. Acquisition of occasional flowage easements to support the increased full pool/surcharge storage provided for by the dam raise will, as a policy determination and not as a function of flood frequency, be pursued to support the project. The purpose of the proposed raise is to provide for additional flood control (surcharge) storage space and to provide a greater degree of flood protection to the Sacramento metropolitan area. The proposed 12 ft. raise results in a flood pool elevation of 487 ft. The original minimum elevation for property acquisition was at the 486 ft. elevation with a substantial buffer for most of the project with the exception of the Mooney Ridge area and areas where streams enter the lake. In the Mooney Ridge location the take line followed an existing property line with the elevation at about 460 ft. and greater, there was a subsequent acquisition of an area known as Mooney Ridge Park whereby the Government obtained title to lands up to the 475+ ft. elevation. For all three proposals private property would be inundated where inundation

was not previously possible. Under the Corps' acquisition policy these areas that would now be subject to inundation would be subject to the acquisition of a occasional flowage easement by the cost share partner to support the Government's operation of the project. For the 3.5 ft. dam raise alternative, whereby the flood pool is at the 478 ft. elevation, the impact to the homes/backyards to the Mooney Ridge home sites is minor and would have a minimal impact to the lower portion of back yards. There is a minor impact to those areas where feeder streams and drainages enter the project. The highest dam raise under consideration (12 ft.) results in a maximum flood control pool of 487 ft. To support this maximum proposed flood pool without the construction of additional protective dikes, an additional 27 acres of perpetual flowage easement at up to 49 separate locations would need to be acquired. This represents .17% (.0017) of the existing project area. Flowage easements obtained by the cost share partner would be retained by DWR.

The intermediate proposal of a dam raise of 7 ft. with a flood pool of 482 ft. is tentatively identified as the Federally supportable Folsom Enlargement Plan. This plan has substantially less impact to adjacent land owners than the 12 ft. raise with no habitable structures at risk. The acquisition requirements are estimated to be 42% +/- of the requirements at the 487-flood pool elevation. At any of the three elevations considered for Folsom Enlargement Plans, the LERRD's costs will be a minor part of the project. The maximum estimated real estate acquisition costs which is associated with the 12 ft. dam raise proposals is currently estimated to be 1.9% (.019) of the total project costs.

All of the dam raise alternatives require work on the concrete dam, the earthen wing dams, Mormon Island Dam and Dikes 1 through 8. This work would be on existing project features and within project boundaries. A right-of-entry(s) granted by the Bureau of Reclamation and approved by the State of California, Department of Parks and Recreation (DPR) is required to support such proposed work. Due to the de-facto partnership between the two entities, DPR has the power to delay or block the grant of such rights and to extract concessions on the part of the Government such as commitments to fund additional staff, limit the work to certain shifts, hours, days of the week; and limit the areas to be used for staging and material storage where project work may impact their park visitation, recreation, or other park management concerns. Restrictions of this nature can have a significant impact to project costs.

For the dam raise, the proposals include temporarily relocating the bridge and roadway that cross the top of the dam as a project feature. This is not a real estate relocation. The Government owns the bridge and the road, and there is no roadway easement or Federal Highway requirement associated with that bridge. LERRD's to support the bridge would be acquired by the local cost share partner. The alignment as proposed for this study would result in the use of existing project lands with a requirement to acquire a road right-of-way from the State of California.

There is a PG&E power plant (Newcastle Powerhouse) within the existing project that sits below the full pool elevation of the project. A preliminary analysis has been conducted and there is no indication that any of the proposed dam raises result in a taking of the Newcastle Powerhouse.

Environmental mitigation requirements for the three dam raise proposals are minor and will be accommodated within the existing boundary. Those lands used for borrow within the Mississippi Bar area (Government owned lands) will be restored and additional restoration work will be performed to enhance the area once the borrow has been removed and the project is completed.

Alternative 5: Stepped Release to 160,000 cfs

For the 160,000 cfs Stepped Release plan the costs would include the downstream requirements of the modification of the Sacramento Weir and widening of the Sacramento Bypass by 1,000 ft. Only minor modification of the levees and bridges would be required in the Lower American River. Based on an analysis of the impacts of the increased flows associated with this proposal levee strengthening would be required in the Yolo Bypass, Sacramento River and Steamboat Slough.

The Widening of the Sacramento Weir and Bypass will require the acquisition of 195.65 acres of perpetual flowage easement, the acquisition of 21.26 Flood Protection Levee Easement (FPLE) and the use of 43 acres of staging area.

The levee work required to mitigate for the increased flows within the Yolo Bypass will consist of structural modifications (slurry walls/seepage berms/relief wells) without raising the levee. The real estate required to support this work is estimated to be 23.59 acres of additional FPLE, and 24.54 acres of TWAE.

Alternative 6: Stepped Release to 160,000 cfs with new outlets

This alternative provides for stepping early to a flow of 145,000 cfs. through the use of a low level outlet added to the Folsom Dam as a component of this alternative. No additional real estate acquisition would be required for the outlet component of this alternative.

Alternative 7: Stepped Release to 180,000 cfs

For the 180,000 cfs. stepped release proposal real estate acquisition would be required to support the raising and strengthening of existing American River levees by 2 ft. for about 13.5 miles, the erosion protection of some levee slopes, the construction of 3.7 miles of new levees and /or floodwalls, the raising of three bridges, the modification of interior drainage facilities, and downstream of the American River, the modification of the Sacramento Weir and widening of the Sacramento Bypass by 1,000 ft. The increased flows associated with this proposal could also require levee work in the Yolo Bypass and in the Sacramento River and Steamboat Sloughs to maintain the existing levels of levee performance. This work could involve the installation of relief wells, seepage berms, or slurry wall work

The levee raising would require 16.5 acres of permanent additional levee footprint/FPLE, 32.8 acres of temporary work area easement (TWAE), and 15 acres of staging area. It is expected that the additional footprint, work areas and staging areas would be on the waterside of the levee.

The construction of 3.7 miles of new levees and/or floodwalls would require the acquisition of 50 acres of permanent FPLE, 18.5 acres of TWAE, and 40.5 acres of staging area.

The Widening of the Sacramento Weir and Bypass will require the acquisition of 195.65 acres of perpetual flowage easement, the acquisition of 21.26 FPLE and the use of 43 acres of staging area.

The levee work required to mitigate for the increased flows within the Yolo Bypass will consist of structural modifications (slurry walls/seepage berms/relief wells) without raising the levee. The real estate required to support this work is estimated to be 23.59 acres of additional FPLE, and 24.54 acres of TWAE. For the lower Sacramento River and slough areas the real estate requirements to support the levee strengthening are estimated to be 3.7 acres of FPLE.

Advanced Release

While the advanced release proposal could result in damage to existing levees, if managed as intended, the same total volume of water would be released; but the releases would be spread out over a longer period of time; thus allowing for better management of water, less impact to project levees and the creation of flood control storage capacity. The intent is to reduce impacts to the flood control system and to prevent flooding. Operation as intended would not require hydraulic mitigation; and therefore, would not require the acquisition of any additional real estate. There are currently no real estate costs associated with this proposal.

Ecosystem Restoration

An Environmental Ecosystem Restoration component has been proposed for this project. There are four sites under consideration and 26 separate measures are proposed with an additional temperature shutter dam outlet modification proposal. Selected measures could impact multiple sites. Site(s) choice(s) will be dependent upon an environmental incremental analysis of the benefit to cost ratio of each proposed measure in relation to the proposed site, and the identification and availability of a local cost share partner to support an Ecosystem Restoration Plan. For three of the areas under consideration the County of Sacramento is the landowner and the most likely cost share partner. For the temperature shutter proposal no real estate acquisition would be necessary. Staging would be on Federal property and the work would be done on the dam.

A real estate cost estimate of the lands for each site of the proposed ecosystem restoration component of the study has been completed and restoration costs are tabulated in Table II.

Table I – LERRD’s Requirements

ALTERNATIVES	FEE- ACRES	FLOWAGE EASEMENT ACRES	TWAE ACRES	STAGGING ACRES	ROAD ROW	BORROW CU. YDS.	RELOCATIONS
ALTERNATIVE 1 NO ACTION	0	0	0	0	0	0	NONE
ALTERNATIVE 2 3.5 FT. RAISE	0	8.67	0	0		65,000	NONE
ALTERNATIVE 3 8.5 FT. RAISE	0	16.08	0	0		495,000	NONE
ALTERNATIVE 4 12 FT RAISE	0	27.35	0	0		989,100	NONE
MITIGATION FOR* DAM RAISE ALTERNATIVES	0	0	0	0	0		NONE
ALTERNATIVE 5 STEPPED RELEASE 160,000 CFS		195.65 & FPLE@44.85	24.54	43	0		NONE
ALTERNATIVE 6 STEPPED RELEASE 160,000 WITH NEW OUTLETS		195.65 & FPLE@44.85	24.54	43	0		NONE
ALTERNATIVE 7 STEPPED RELEASE 180,000		195.65 FPLE@61.30	57.34	58	0		HOW AVE. GUY WEST HAZILE AVE \$9,100,000
ADVANCED RELEASE	0	0	0	0	0	0	0
ALTERNATIVE 2,3,4 MITIGATION*	0	0	0	0	0	0	0
MITIGATION	233.07						
ECOSYSTEM RESTORATION							
URRUTIA	251						
WOODLAKE	283						
BUSHY LAKE	347						
ARADENBAR	280						
TEMPERATURE SHUTTER	0	0	0	0	0	0	0

***Mitigation will occur at Mississippi Bar as part of the restoration.**

PUBLIC LAW 91-646 RELOCATIONS AND BENEFITS

For those elements addressed in this Real Estate Plan no Public Law 91-646 relocations or benefits have been identified nor are any anticipated as a result of the any of the candidate plans.

MINERAL INTERESTS/ACTIVITY

No marketable mineral rights will be encountered or impacted in any of the features addressed in this Real Estate Plan.

HAZARDOUS, TOXIC, OR RADIOACTIVE WASTE (HTRW)

All components discussed in this plan consist of the modification or enhancement of existing flood control features. An HTRW survey and assessment has been made of the project by the appropriate Sacramento District element and no HTRW has been identified or associated with any of the existing or proposed features.

SPONSORS ABILITY TO ACQUIRE

The non-Federal sponsors of the flood control project include the Reclamation Board of the State of California and the Sacramento Flood Control Agency (SAFCA). The Reclamation Board, through the Department of Water Resources (DWR), has the ability to acquire the necessary rights in real estate for the flood control project. DWR has the power of eminent domain pursuant to Water Code Section 8590, et seq., and Code of Civil Procedures Section 1230.010, et seq. DWR has an experienced right-of-way staff, which has acquired lands for numerous flood control projects since implementation of the Water Resources Development Act of 1986. DWR acquired the necessary LERRDS for the WRDA-96 Common Elements, a cost shared project of which this would be an outgrowth. With this prior experience the DWR right-of way staff has directly applicable experience to this project and will be an asset in accomplishing the acquisition. SAFCA also has the power of eminent domain through the SAFCE Joint Exercise of Powers Agreement adopted on September 26, 1989, and the SAFCA Act that was signed by the Governor on August 10, 1990. SAFCA does not have a right-of-way staff so any right-of-way work performed by SAFCA would be contracted. The sponsor has been advised of P.L. 91-646 requirements and the requirements for documenting expenses for credit purposes. A checklist showing the Sponsors ability to acquire and a certified financial plan supports the existing PCA for WRDA-96. A new checklist and amended PCA would be prepared and coordinated with the Sponsor for any new project elements that are approved as a result of this study.

ESTATES

For real estate requirements in excess of pre-existing project lands, the non-Federal Sponsor will acquire the minimum interests in real estate, which will support the construction and subsequent operation and maintenance of the project. The estates

identified in the various alternatives include FPLE, Temporary Work Area Easements (TWAE), Occasional Flowage Easements, Road Easements, Staggering Areas, Borrow Sites and Fee Title to mitigation lands. Utility/Facility Relocations are also identified. Should work be required on existing Federal Project lands, Rights-of-Entry will be negotiated with the Federal agency that has control and custody of the project. The non-Federal cost share partner will be responsible for the acquisition of new lands required for mitigation, and the relocation of facilities and utilities, should such relocation be required. Lands/estates currently owned by the cost share partners but not previously credited towards the project will be credited upon completion of construction and submittal for credit as well as those additional lands/estates acquired for these specific project purposes.

ZONING ISSUES

Lands under consideration for the proposed alternatives are zoned Single Family Residential, Rural Residential, Small Acreage Lots, and Agricultural. The areas proposed for restoration are all within the American River Parkway-Flood Zone and zoned accordingly. The restoration work would be consistent with the zoning.

BASE LEVEL COST ESTIMATE

Table II - LERRD's COSTS

SITE	ESTATES	ACRE	LERRDS COST (in millions)	FED. ADMIN. COSTS (in millions)	NON- FED. ADMIN. COSTS (in millions)	SUBTOTAL OF COSTS (in millions)
ALT. 2 - 3.5 FT.	FLOWAGE EASEMENT	8.67	0.923	.200	.300	1.42
ALT. 3 – 8.5 FT.	FLOWAGE EASEMENT	16.08	1.68	.440	.546	2.67
ALT. 4 – 12 FT.	FOLWAGE EASEMENT	28.35	3.78	.885	.685	5.35
ALT. 5- 160K CFS	FPLE/FLOW/ TWAE/STA G.	308.04	.426	.365	.264	1.04
ALT. 6 – 160K CFS & OUTLETT	FPLE/FLOW/ TWAE/STA G.	308.04	.426	.365	.264	1.04
ALT. 7 – 180 CFS	FPLE/FLOW/ TWAE/STA G.	897.84	.986	.559	.431	1.98
ENV. MITIGATION	FEE	233.07	.093	.038	.071	0.20

ENVIRONMENTAL RESTORATION	FEE	1,161	2.12	.042	.083	2.25
TOTAL LERRD'S COSTS	N.A. ALL ALT.'S WILL NOT BE SELECTED	.				

Table III - REAL ESTATE MILESTONES

American River Long Term Study	COE*	COE	NFS*	NFS
	START	FINISH	START	FINISH
RECEIPT OF FINAL DRAWINGS FROM ENGINEERING				
EXECUTION OF ADDENDUM TO PCA				
FORMAL TRANSMISSION OF ROW DRAWINGS & INSTRUCTIONS TO ACQUIRE LERRD				
CONDUCT LANDOWNERS MEETINGS				
PREPARE/REVIEW MAPPING AND LEGAL DESCRIPTIONS				
OBTAIN/REVIEW TITLE EVIDENCE				
OBTAIN/REVIEW TRACT APPRAISALS				
CONDUCT NEGOTIATIONS				
PERFORM CLOSINGS				
PREPARE/REVIEW CONDEMNATIONS				
OBTAIN POSSESSION				
COMPLETE/REVIEW PL 91-646 BENEFIT ASSISTANCE				
CONDUCT/REVIEW FACILITY AND UTILITY RELOCATIONS				
CERTIFY ALL NECESSARY LERRD AVAILABLE FOR CONSTRUCTION				
PREPARE AND SUBMIT CREDIT REQUESTS				
REVIEW/APPROVE OR DENY CREDIT REQUESTS				

***COE – Corps of Engineers**

***NFS – Non-Federal Sponsor**

ELEMENTS NORMALLY DISCUSSED IN THE REAL ESTATE APPENDIX

The discussion concerning Federal Lands, and Partner Owned Lands will be expanded once a specific plan or plans are selected through Corps' planning process, of which the public review and comment process is an integral part, and put forward. At that time, public meetings identifying the selected plan and soliciting the attitude of the landowners will be held. With a selected plan the real estate mapping will be done and the human resource requirement needed to support the acquisition of the necessary LERRD's will be identified and analyzed and an acquisition schedule prepared. An overall assessment of the project will be made to insure smooth coordination between LCP and the Government.